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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,380

04/19/2006

Anthony Morali

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EXAMINER

TRINH, THANH TRUC

ART UNIT

PAPER NUMBER

1795

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/576,380	<b>Applicant(s)</b> MORALI, ANTHONY	
	<b>Examiner</b> THANH-TRUC TRINH	<b>Art Unit</b> 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 1-20 are objected to because of the following informalities:

Independent claims 1 and 9 claim "in a solar rail or railing system, the improvements comprising:". However, in all the dependent claims refer to "the system". It is unclear as to what is claimed.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 19-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As newly added, claims 19 and 20 recite limitation "without other panels." There is no support for this limitation in the originally filed disclosure. In contrary with this limitation, the originally filed disclosure indicates multiple panels in a solar rail or railing system, such as panels 180.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As newly added, claims 19 and 20 recite limitation "without other panels" in line 1. The meets and bounds of this limitation cannot be determined. It is unclear as to what "other panels" are referring. There is no description in the disclosure to indicate "the system without other panels".

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Garvison et al. (US Patent 6111189).

Regarding claims 1-4, as seen in Figures 1, 3 and 21, Garvison et al. teaches a panel for solar rail or railing system comprising first and second transparent glass panels (14 and 44 as seen in Figure 21); an array of solar cells (26) spaced from each other by the trench (42) but connected to each other by interconnect (40) on a transparent film (46) sandwiched between the glass panels (14 and 44); a bottom rail

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(end rail 172 as seen in Figure 3) for supporting the sandwich of film and glass panels from a portion of a building (See col. 2 lines 65-67); a top rail (end rail 170 as seen in Figure 3) for an outlet conduit (raceways 194 and 202) of the electrical connection (wires 164, 166 and interconnecting cable 196 as seen in Figure 3) of the solar cells. (See Figures 3 and 21, col. 4 line 62 to col. 6 line 38). The bottom and top rails (172 and 170) are connected together as bottom and top rail elements by side rail (128). The top rail (end rail 170) can be gripped by a hand, therefore it is the Examiner's position that the top rail forms a handrail or the top rail element forms a handrail.

Regarding claims 5-8, Garvison et al. teach a panel for a solar railing system that can be fastened directly to a roof, wall, rack, beam or other structure, wherein the output wires can be connected to an inverter to convert DC to alternating current (AC) for use in many homes (See col. 2 lines 65-67 and col. 10 lines 14-19). Therefore it is the Examiner's position that Garvison et al. does teach the outlet conduit of the top rail (end rail 170 with wires and cables) is electrically connected to the building.

Regarding claims 9 and 19, Garvison et al. teach a panel for a solar rail or railing system comprising first and second transparent glass panels (14 and 44 as seen in Figure 21); an array of solar cells (26) spaced from each other by the trench (42) but electrically connected to each other by interconnect (40) on a transparent film (46 made of EVA – See col. 12 lines 42-44) sandwiched between the glass panels (14 and 44); a member (mechanical frame 162 including side rail 128 and end rails 170, 172 as seen in Figure 3) for supporting the sandwich of film and glass panels from a portion of a building; and an outlet (raceways 194 and 202 with wires 164, 166 and cable 196)

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electrically connected to the electrical connection of the solar cells. (See Figures 1, 3 and 21; col. 2 lines 65-67; col. 4 line 62 to col. 6 line 38).

Regarding claims 10-13, Garvison et al. teaches one of the member (162) is a bottom rail (end rail 172) supporting the bottom of the sandwich, the outlet comprises a conduit (raceway 194 or 202) in a top rail (end rail 170) along a top of the sandwich. Garvison et al. teaches the top rail (end rail 170) supporting a platform (solar module having glass surface 14 as seen in Figures 3 and 21), therefore it is the Examiner's position that the top rail forms a hand rail.

Regarding claims 14-18 and 20, Garvison et al. teach a panel for a solar railing system that can be fastened directly to a roof, wall, rack, beam or other structure, wherein the output wires can be connected to an inverter to convert DC to alternating current (AC) for use in many homes (See col. 2 lines 65-67 and col. 10 lines 14-19). Therefore it is the Examiner's position that Garvison et al. does teach the outlet conduit of the top rail (end rail 170 with wires and cables) is electrically connected to the building.

Regarding claims 19-20, it is the Examiner's position that the solar cell (or solar rail or railing system) as described above has no other panels sandwiched between the glass panels. (See Figures 21 and 3)

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirai (JP 11-13130) in view of Dran et al. (US Patent 4321418).

Regarding claims 1, 3-4 and 9-13, Hirai teaches a handrail structure for a building comprising solar power generation modules (15); a bottom crosspiece (13) which corresponds to the instant bottom rail and which supports the solar power generation module (15) from a portion of the building; and a top rail comprising top crosspiece (12) and coping (14) which together form an outlet conduit that houses interconnection cable (45) for outputting the power of the connected solar cells in the module (15) (See Figures 1, 2 and 4; and paragraphs 0001, 0006, 0020-0022, 0031, and 0034). Hirai's structure is a handrail structure, and thus, said top crosspiece (12) and coping (14) clearly form a handrail, as per instant claims 3-4 and 11.

Hirai does not specifically teach that each of its solar power generation modules (15) comprises the instant glass panels, connected solar cells, and sandwiching transparent or, at least, translucent film between the glass panels.

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Dran et al. teaches a solar panel comprising glass panels (6, 7); spaced and connected solar cells (2); and the instant sandwiching film (5) (See Figures 1-4; col. 2, line 65 through col. 3, lines 3-4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used Dran et al's solar panel for Hirai's solar power generation module (15) because Dran et al's solar panel provide the advantage of being free of bubbles and other undesirable heterogenities. (See "Disclosure of Invention" of Dran et al.)

Regarding claims 2, as seen in drawing 1, Hirai et al. teaches two panels (15), and the top crosspieces (12) and the bottom crosspieces (13) for each panel (15) are connected to each other at support (11).

With respect to claims 5-8 and 14-18, the connection of the interconnection cable (45) to the building would have been obvious within the skill of an artisan so that the electricity generated by the solar power generation modules (15) could be used by the building.

With respect to claims 19-20, it is the Examiner's position that there are no other panels sandwiched between glass panels of Dran's solar panel.

### ***Response to Arguments***

Applicant's arguments filed 4/21/2008 have been fully considered but they are not persuasive.



Applicant argues "[t]he mere disclosure of rails in the patent does not make it a rail or railing system, as claimed, and no such system is disclosed or even suggested by, for example, including the words 'railing' or 'balustrade' anywhere in the patent." However, this argument is not deemed to be persuasive. In the broadest interpretation given to the limitation of the claim, the end rails (170 or 172) of Garvison et al. are clearly corresponded to the bottom and top rail of the instant claims as indicated in the rejection above. Garvison et al. teaches all the limitations of the instant claims, therefore the reference is deemed to be anticipatory. In addition, there is no such term as "balustrade" in any claims.

Applicant also argues "[t]he Hari patent publication discloses a rail or railing system with balustrade solar panels, but the panels are spaced by an air gap as clearly shown in Fig. 2, and not sandwiched as claimed. The Dran patent is, therefore, cited for a sandwich panel, as claimed, but makes no disclosure or suggestion of using the panel in the rail or railing system that makes up the whole claimed invention. Therefore, there is no rational underpinning for selecting this panel contrary to the teaching of the Hari patent to reconstruct the whole claimed invention, which is still considered (MPEP 2141.01I), except hindsight from the applicant's disclosure, which still is not permitted." However, the Examiner respectfully disagrees. First of all, there is no teaching about air gap in Hari. Secondly, Hari teaches handrail structure using solar panel (or photovoltaic module – See "Field of the Invention" of Hari), and Dran teaches solar panel (See Abstract of Dran). Since Hari and Dran are both concerned with solar panel, one would have a reasonable expectation of success from the combination.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh-Truc Trinh whose telephone number is 571-272-6594. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TT  
5/20/2008

/PATRICK RYAN/  
Supervisory Patent Examiner, Art Unit 1795